

# COMMITTED TO NET-ZERO CARBON EMISSIONS BY 2050

**Glass Forever: our circular economy approach to sustainability**



**GLASS  
FOREVER**

# PRE-CONSUMER FLAT GLASS RECOVERY AND RECYCLING

On 23 September 2019, during the United Nations Summit on Climate Change, we pledged that the entirety of the Saint-Gobain global group would undertake a transition towards achieving net-zero carbon emissions by the year 2050.

## A commitment to a circular economy for flat glass

**For over 20 years, Saint-Gobain Glass has been an industry leader in supporting our customers for the responsible reclamation and remanufacture of glass cullet. We work directly with glass processors to implement efficient glass recovery methods, ensuring a circular economy approach in our operations.**

In the face of the climate emergency, it is imperative to challenge existing business models to secure a more sustainable future for all inhabitants of our planet.

Through Glass Forever, our teams closely collaborate with our customers to ensure that, whenever possible, both pre and post-consumer glass undergo recycling processes, contributing to the production of high-performance glass without impacting the quality of our new glass. This is possible because glass can be infinitely recycled without deterioration of quality.

**SAINT-GOBAIN WILL MANUFACTURE ALL  
FLAT GLASS USING 50% CULLET BY 2030.**

# LEADING THE INDUSTRY IN GLASS SUSTAINABILITY

**Better glass quality**  
with the production  
of optimised batches.

**Limit CO<sub>2</sub> and sulphur oxide  
emissions released during the  
production process.**

Using one tonne of cullet in place  
of one tonne of raw materials can  
reduce scope 1, 2 and 3 CO<sub>2</sub>  
emissions by

**700kg.**

**Preserve natural resources  
and biodiversity.**

For every one tonne of cullet  
used, we can save up to

**1200kg**

of virgin raw materials, this  
includes sand, soda ash and  
limestone.



**Increased competitiveness**  
by meeting the market  
demand for recycled  
products.

**30%** less energy is required  
in the furnace when melting  
cullet than raw materials.

**Less requirement for  
raw materials.**  
Due to the demand and  
scarcity of raw materials,  
the price of these raw  
materials is likely to rise.

# WE ARE SET TO ACHIEVE 50% CULLET USAGE IN SAINT-GOBAIN GLASS PRODUCTION BY 2030.

## Cullet types

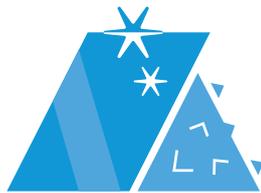
There are 3 types of cullet depending on its origin, as defined by the ISO 14021 standard:

### Internal cullet



Cullet originating directly from glass production. This particular type of cullet remains within the flat glass manufacturing facility and is immediately recycled within the production lines.

### Pre-consumer cullet



Glass waste originating from glass sheet processing and from products that are still in transit to the end customer. This form of cullet can be encountered at glass processing sites.

### Post-consumer cullet



Post-consumer cullet refers to end of life glass that has already been used by consumers and is collected for remanufacturing. This can include glass from commercial facades, home renovations and upgrades and even interior glass used across various commercial buildings such as shopping centres and offices etc. Post-consumer cullet is glass that has reached the end of its lifespan, either due to upgrades in buildings or maintenance work that makes legacy windows inefficient and therefore, ineffective for consumers.



# JOIN OUR CULLET RETURN PROGRAMME

Contact  
Saint-Gobain Glass  
for more information  
on our cullet recycling  
machines or to find a  
partner near you.



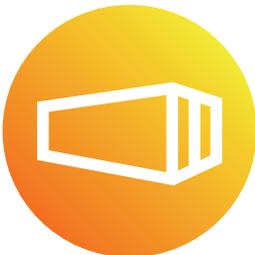
## Cullet collection bags

Safely dispose of sharp glass pieces with Saint-Gobain Glass cullet collection bags. Easily secured in a frame or hopper, these bags can be conveniently returned to our Eggborough plant using our in-loader.



## Skip collections

Our partnership-driven skip collections simplify end-of-life glass disposal, especially on deconstruction sites. Prompt removal directly from the site ensures a hassle-free experience, prioritising safety, and efficiency for our clients.



## Cullet crushing machine

Explore our cullet crushing machines designed to separate glass from glazed units. Crush glass on-site, and we'll collect it for recycling into new high-performance glass. Simple to install and use, these machines offer a scalable solution for glass recycling.



## Large volume cullet collection

For high-volume glass processors, opt for our standing trailer cullet collection. Fill the trailer with waste glass, and we'll replace it as needed based on a pre-established schedule, providing a seamless and efficient solution.

# SUSTAINABILITY: WHY IT'S IMPORTANT



First established in 2001, our sustainability initiatives have grown significantly and are known today as Glass Forever, over the years we've been learning and adapting our methodology to maximise opportunities with cullet. For example, as with monolithic glass, we can remanufacture laminated glass, a process which was previously highly difficult. The laminated glass is processed and introduced into the furnace without impacting the quality of the new glass or increasing emissions.

We've also innovated a series of patented glass-crushing machines, allowing us to scale up our glass-processing operations safely and practically whilst averting potential cullet contamination. A prime illustration of our innovation is our mobile crushing machine, ingeniously housed within a recycled shipping container. This setup empowers Saint-Gobain Glass to readily deploy our technology to significant deconstruction sites throughout the UK.



**GLASS  
FOREVER**

**SAINT-GOBAIN GLASS**

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